June 9, 1993

MEMORANDUM

SUBJECT: Site Inspection Prioritization-Level II
Owens Corning Fiberglass Corp., St. Helens, Oregon
Work Assignment C1003956
Contract 068-W9-0009

TO: Debbie Robinson, EPA

FROM: Julie Howe, PRC

PRC Environmental Management, Inc. (PRC) has completed a Level II site inspection prioritization (SIP) and hazard ranking system (HRS) PREscore for the former Owens Corning Fiberglass Corporation (Owens Corning) site in St. Helens, Oregon. The facility is currently owned and operated by Armstrong World Industries. A score of 18.14 was calculated based on an observed release to groundwater and an assumed observed release to surface water.

Waste Quantity

The capacity of the former aeration lagoon was 8 million gallons, equal to 39,612 cubic yards. Since analytical results were available for the sediments that remained when the lagoon was backfilled, a hazardous constituent quantity was calculated. As a worst-case scenario, the highest concentrations value for each constituent from the five sediment samples collected in 1989 were used for scoring, as well as the entire volume of the lagoon. (Again, a worst-case scenario was used since the sampling report specified that about 6 inches of sediment were present below 7 feet of wastewater when the sampling was conducted.) Waste sources also included a former sludge holding pond of approximately 20,000 square feet, and an asphalt-naphthalene waste pile that was estimated to have a volume of 90 cubic yards. The sources are discussed in greater detail in the attached SIP report.

Groundwater Migration Pathway

The groundwater pathway score of 9.53 is based on an observed release established by sampling results from 1987. Groundwater monitoring wells were installed in 1987 to determine whether a release to groundwater had occurred from contaminated soil in the vicinity of an aboveground asphalt-naphthalene storage tank. These wells were sampled twice, and trace quantities of volatile organic compounds and oil and grease were detected. There is no background well present and none of the constituents found could be positively attributed to the site sources.

There are four drinking water wells reported by the Geographic Information System (GIS) within 4 miles of the site. There are also two "Rennie" collectors located in the bedrock aquifer beneath

the Columbia River, 1.5 miles downstream from the site. These collectors are operated by the city of St. Helens and serve a population of approximately 8,000 people. The nearest well is located approximately one-half mile from the site and serves three people. The McNulty Water Association draws water from two wells (560 people were assigned to each) located 1.5 and 2.5 miles from the site. Ft. Gorton draws water from a well located 3.5 miles from the site that serves an estimated 500 people.

Surface Water Migration Pathway

A pathway score of 34.71 was calculated for the surface water migration pathway, based on an assumed observed release at the former outfall. This outfall was located at the end of a pier and discharged into water 6 to 20 feet deep. To assess a worst-case scenario, a contaminated sediment sample at the former effluent outfall was assumed. It was also assumed that a 0.3-mile segment of wetlands and 1 pound of a food chain species were subject to Level II contamination.

Three surface water intakes are located approximately 5 miles downstream of the outfall. The town of Scappoose serves a population of 3,310; the Goble Water Association supplies water to 225 people, and the city of Prescott has an intake that serves 98 people.

Other data or assumptions used for scoring this pathway included the following:

- An assumed wetlands frontage of 15 miles, including 0.3 miles subject to Level II contamination
- A GIS-reported fish production of 6,830,665 pounds in the Columbia River segment and an assumed fish production of 1,000,000 pounds in the 1.5-mile Scappoose Bay segment
- Surface water used as a resource

Air Migration Pathway

Evaluation of the air migration pathway resulted in a pathway score of 4.01. Contaminated soils containing volatile organic compounds were assumed to exist within 2 feet of the surface and in the waste pile. The nearest individual is 0.2 miles from the site; target populations by distance ring were obtained from the GIS data base as follows:

On-site workers	175
0 - 1/4 mile	66
1/4 - 1/2 mile	128
1/2 - 1 mile	3,465
1 - 2 miles	5,895
2 - 3 miles	2,007
3 - 4 miles	1,408

No sensitive plant or animals were reported by GIS, and no on-site resources were documented. Wetlands acreage by distance ring was estimated from the GIS map.

Soil Exposure Pathway

A soil migration pathway score of 2.14 was calculated based on the presence of 175 full time workers and an attractiveness and accessibility value of 10. The area of each source was estimated as follows: sludge pond - 20,000 square feet, former lagoon - 200,000 square feet, waste pile - 300 square feet, and contaminated soil 10,000 - square feet.

Summary

This PREscore is based on the worst-case scenario that can reasonably be expected. Although contaminants were detected in samples from on-site wells during the first sampling round in 1987, concentrations were very low, attribution to the facility was not certain.

The surface water pathway score was based on an assumed level II sediment sample. The contamination assumed seems unlikely since discharge was into relatively deep water, since no discharge (except the lagoon draining) has occurred in the past 12 years, and since the channel was dredged in 1981. Attribution to the site would be difficult because of the presence of Multnomah Plywood and Boise Cascade, and because tidal influences affect the surface water flow direction.

Although there are surface water intakes downstream, the dilution factor is very high.
This evaluation was based a on review of U.S. Environmental Protection Agency and Oregon Department of Environmental Quality files and documents obtained from Armstrong World Industries as well as on observations made during a site visit conducted by PRC on April 14, 1993. In the absence of data, assumptions were made that represented a worst-case scenario.

Site Address: Armstrong World Industries
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Site Contact: Bob Lalande, Facilities and Environmental Coordinator
503/397-7661

Information Sources

Information used to score this site was derived from the following documents:

Ecology and Environment, Inc. 1984. Site Inspection Report. December 21, 1984.

Ecology and Environment, Inc. 1988. Site Inspection Reassessment/Preliminary HRS Score for Owens-Corning Fiberglass Plant, St. Helens, Oregon. March 28, 1988.

EPA, 1993. Geographic Information System, Superfund Site Discovery System, printout for Owens Corning. January 15, 1993.

CH2M Hill 1987. Environmental Survey of Owens Corning Fiberglass Plant, St. Helens, Oregon. January 29, 1987

CH2M Hill 1988. Letter Report to Armstrong World Industries Re: St. Helens, Oregon, Building Board Plant. January 7, 1988.

SRH Environmental Management 1989. Report on Limited Remediation Activities, Armstrong World Industries, Inc., St. Helens, Oregon Facility. October 30, 1989.

ODEQ 1989a. Letter to CRSS Sirrine (Armstrong council) Re: Special Permit. April 3, 1989.

MEI-Charlton 1989. Letter Report Re: Sampling and Analysis of Bottom Sediment and Water from Lagoon. March 9, 1989.

ODE 1989b. Interoffice Memorandum Re: Sample Plan for On-Site Lagoon (at Armstrong), February 13, 1989.

Armstrong 1988. Letter to DEQ Re: EP Toxicity Analysis, BOD, & SS Aeration Basin, Armstrong World Industries, Inc. - St. Helens Plant. November 30, 1988.